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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/006,490	12/06/2001	Gregory D. Van Wiggeren	10010750-1	3236

7590 09/09/2004  
AGILENT TECHNOLOGIES, INC.  
Legal Department, DL429  
Intellectual Property Administration  
P.O. Box 7599  
Loveland, CO 80537-0599

EXAMINER


BROWN, KHALED

ART UNIT	PAPER NUMBER
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2877

DATE MAILED: 09/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/006,490	<b>Applicant(s)</b> VAN WIGGEREN, GREGORY D.	
	<b>Examiner</b> Khaled Brown	<b>Art Unit</b> 2877	

**– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –**  
**Period for Reply**

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 December 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>12-6-01</u> . | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Swanson et al (US 5956355).

Re clms 1,13: Swanson discloses a method of reducing phase noise detected using an interferometric system comprising the steps of: generating a light beam having a frequency that is intentionally varied as a function of time and that includes undesired frequency fluctuations, said undesired frequency fluctuations being phase noise (Col 6 line 21-34); directing a first beam portion of said light beam to a reference interferometer, said reference interferometer having known optical characteristics (Col 6 lines 35-42); directing a second beam portion of said light beam to a test interferometer (Col 2 line 55); detecting optical outputs for each of said reference and test interferometers, determining phase information regarding each of said optical outputs (Col 2 line 66- Col 3 line 1), and for each particular one of said reference and test interferometers, using said phase information that is specific to said particular one and using delay information that is specific to the other of said reference and test interferometers to at least partially cancel said phase noise (Col 6 lines 46-62).

Re clm 2: Device under test (Col 6 line 34)

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Re clms 3,4,16: by a time  $t$  that is representative of a delay introduced within said test interferometer by the DUT (Col 6 line 61- Col 7 line 12)

Re clms 5,11: group delay properties (Col 1 lines 39-42)

Re clm 6: sweep frequency mode (Col 6 line 39)

Re clm 7: reference and test interferometers (Col 2 lines 49-50 and Col 6 lines 34-35)

Re clm 8: Swanson discloses an interferometric system comprising: a source of coherent light (14), said source being susceptible to irregular frequency variations (Col 6 lines 1-4); a reference interferometer (96); a reference detector optically coupled to said reference interferometer (Fig 1); a test interferometer (18), said test interferometer being configured for optical coupling to a device under test (DUT) with a delay that is susceptible to variations with said frequency (38), a test detector (50); and a processor, said processor being enabled to identify optical characteristics of said DUT following imposing said delay of said DUT on said reference output signal and imposing said known delay on said test output signal (22).

Re clms 9,10,15: a first, second and third differencing module (Col 6 line 54- Col 7 line 38)

Re clm 12: tunable laser (Col 2 line 49)

Re clm 14: offsetting the time (Col 6 lines 61-64)

Re clm 17: fiber optic cabling under test (Col 2 line 10)

Re clm 18: splitting the laser light into the test and reference interferometers (Col 6 lines 32-41)

***Conclusion***

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Szfraniec et al 6486961, Newberg et al 5608331, Ozeki et al 5390017, Tearney et al 6501551, Kim et al 6323950, Sternberg et al 6606583, Javan 5068864, Ryu et al 4984884, Rosenfeldt et al 6606158, Mc Bride et al 5721615, Yamaguchi et al 6594595, Newberg 4918373, Moulthrop et al 6211663 and Cuddy 6570458.

4. Note: a signed copy of the IDS filed 12-6-01 is attached to this office action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khaled Brown whose telephone number is 571-272-2411. The examiner can normally be reached on M-F 8:30am-5pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory J Toatley Jr. can be reached on 571-272-2800 Ext. 77. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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September 6, 2004

  
GREGORY J. TOATLEY, JR.  
PRIMARY EXAMINER SPE 2877